IN THE CLAIMS

1. (original) A method for transmitting a digital signal comprising:

providing first and second streams of digital data;

reordering the digital data of the first stream of digital data in accordance with a first interleave to provide a third stream of digital data; and,

reordering the digital data of the second and third streams of digital data in accordance with a second interleave comprising an inverse of the first interleave to provide a time multiplexed output comprising the second stream of digital data reordered according to the second interleave and the third stream of digital data reordered to reflect the order of the first stream of digital data.

2. (original) The method of claim 1 wherein the digital data in the first stream of digital data are robust VSB data, and wherein the digital data in the second stream of digital data are ATSC data.

3. (original) The method of claim 1 wherein the reordering of the digital data of the first stream of digital data comprises:

providing dummy first stream digital data;

replacing the dummy first stream digital data with digital data of the first stream of digital data; and,

reordering the digital data of the first stream of digital data in accordance with the first interleave.

4. (original) The method of claim 1 wherein the reordering of the digital data of the first stream of digital data comprises:

providing dummy first stream digital data and dummy second stream digital data;

replacing the dummy first stream digital data with digital data of the first stream of digital data;

reordering the digital data of the first stream of digital data and the dummy second stream digital data in accordance with the first interleave to provide the third stream of digital data; and,

wherein the reordering of the digital data of the second and third streams of digital data comprises:

replacing the reordered dummy second stream digital data in the third stream of digital data with digital data of the second stream of digital data; and,

reordering the digital data of the second and third streams of digital data in accordance with the second interleave.

5. (original) The method of claim 1 wherein the data of the first stream of digital data are robust VSB data, wherein the reordering of the digital data of the first stream of digital data comprises:

providing a source of dummy VSB data and dummy ATSC data;

replacing the dummy VSB data with the robust VSB data; and,

reordering the robust VSB data and the dummy ATSC data in accordance with the first interleave to provide the third stream of digital data; and,

wherein the reordering of the digital data of the second and third streams of digital data comprises:

replacing the dummy ATSC data in the third stream with real ATSC data; and,

reordering the robust VSB data and the real ATSC data in accordance with the second interleave.

6. (original) The method of claim 5 wherein the replacing of the dummy ATSC data in the third stream with real ATSC data comprises:

discarding the dummy ATSC data; and,

multiplexing the robust VSB data and the real ATSC data.

7. (original) The method of claim 1 further comprising outer coding auxiliary input data to provide the first stream of digital data, wherein the outer coding increases robustness of the auxiliary input data.

8. (original) The method of claim 7 wherein the outer coding comprises:

reordering the auxiliary input data in accordance with a third interleave to provide interleaved auxiliary input data; and,

outer coding the interleaved auxiliary input data to provide the first stream of digital data.

9. (original) The method of claim 7 wherein the reordering of the digital data of the first stream of digital data comprises:

providing dummy first stream digital data;

replacing the dummy first stream digital data with digital data of the first stream of digital data; and,

reordering the digital data of the first stream of digital data in accordance with the first interleave.

10. (original) The method of claim 9 wherein the outer coding comprises:

reordering the auxiliary input data in accordance with a third interleave to provide interleaved auxiliary input data; and,

outer coding the reordered auxiliary input data to provide the first stream of digital data; and,

wherein the replacing of the dummy first stream digital data with digital data of the first stream of digital data comprises:

reordering the dummy first stream digital data; and,

replacing the reordered dummy first stream digital data with digital data of the first stream of digital data.

11. (original) The method of claim 7 wherein the reordering of the digital data of the first stream of digital data comprises:

providing dummy first stream digital data and dummy second stream digital data;

replacing the dummy first stream digital data with digital data of the first stream of digital data; and,

reordering the digital data of the first stream of digital data and the dummy second stream digital data in accordance with the first interleave to provide the third stream of digital data; and,

wherein the reordering of the digital data of the second and third streams of digital data comprises:

replacing the reordered dummy second stream digital data in the third stream of digital data with digital data of the second stream of digital data; and,

reordering the digital data of the second and third streams of digital data in accordance with the second interleave.

12. (original) The method of claim 11 wherein the outer coding comprises:

reordering the auxiliary input data in accordance with a third interleave to provide interleaved input data; and,

outer coding the reordered auxiliary input data to provide the first stream of digital data; and,

wherein the replacing of the dummy first stream digital data with digital data of the first stream of digital data comprises:

reordering the dummy first stream digital data and the dummy second stream digital data in accordance with a fourth interleave;

replacing the reordered dummy first stream digital data with digital data of the first stream of digital data; and,

passing the dummy second stream digital data.

13. (original) The method of claim 7 wherein the data of the first stream of digital data are robust VSB data, wherein the reordering of the digital data of the first stream of digital data comprises:

providing a source of dummy VSB data and dummy ATSC data;

replacing the dummy VSB data with the robust VSB data; and,

reordering the robust VSB data and the dummy ATSC data in accordance with the first interleave to provide the third stream of digital data; and,

wherein the reordering of the digital data of the second and third streams of digital data comprises:

replacing the dummy ATSC data in the third stream with real ATSC data; and,

reordering the robust VSB data and the real ATSC data in accordance with the second interleave.

14. (original) The method of claim 13 wherein the outer coding comprises:

Reed/Solomon encoding the auxiliary input data;

reordering the Reed/Solomon encoded data in accordance with a third interleave to provide interleaved auxiliary input data; and,

outer coding the reordered Reed/Solomon encoded auxiliary input data to provide the robust VSB data; and,

wherein the replacing of the dummy VSB data with the robust VSB data comprises:

reordering the dummy VSB data and the dummy ATSC data in accordance with a fourth interleave; and,

replacing the reordered dummy VSB data with the robust VSB data.

15. (original) The method of claim 14 wherein the replacing of the dummy ATSC data in the third stream with real ATSC data comprises:

discarding the dummy ATSC data; and,

multiplexing the robust VSB data and the real ATSC data.

16. (original) A transmitter for transmitting robust VSB data comprising:

an outer coder that receives input data and that codes the input data as first robust VSB data, wherein the first robust VSB data is normally ordered;

a first interleave that reorders the first robust VSB data to provide reordered first robust VSB data; and,

a second interleave that reorders the reordered first robust VSB data to provide second robust VSB data, wherein the second robust VSB data is normally ordered, and wherein the first and second interleaves are inversely related.

17. (original) The transmitter of claim 16 wherein the first interleave is an interleaver, and wherein the second interleave is a deinterleaver.

18. (original) The transmitter of claim 16 further comprising a third interleave upstream of the outer coder.

19. (original) The transmitter of claim 16 further comprising:

a source of dummy robust VSB data;

a data replacer that replaces the dummy robust VSB data with the first robust VSB data; and,

wherein the first interleave reorders an output of the data replacer.

20. (original) The transmitter of claim 19 wherein the interleaver is a first interleaver, wherein the transmitter further comprises a second interleaver upstream of the outer coder, and wherein the source of dummy first stream data comprises a third interleaver upstream of the data replacer.

21. (original) The transmitter of claim 16 further comprising:

a source of dummy robust VSB data and dummy ATSC data;

a first data replacer that replaces the dummy robust VSB data with the first robust VSB data; and,

a second data replacer that replaces the dummy ATSC data with real ATSC data; and,

wherein the first interleave reorders the first robust VSB data and the dummy ATSC data, and wherein the second interleave reorders the reordered VSB data and the real ATSC data.

22. (original) The transmitter of claim 21 further comprising:

a third interleave upstream of the outer coder; and,

a fourth interleave upstream of the first data replacer.

23. (original) The transmitter of claim 21 further comprising:

a first Reed/Solomon encoder and a third interleave upstream of the outer coder;

a fourth interleave upstream of the first data replacer;

a second Reed/Solomon encoder downstream of the first interleave; and,

a 2/3 rate coder downstream of the second Reed/Solomon encoder.

24. (original) The transmitter of claim 23 wherein the outer coder comprises at least first and second outer coders coding the input data at different coding rates.

25. (original) The transmitter of claim 21 wherein the second data replacer comprises:

a dummy ATSC data discarder that discards the dummy ATSC data; and,

a multiplexer that combines the reordered robust VSB data and the real ATSC data.

26. (original) The transmitter of claim 16 wherein the outer coder comprises at least first and second outer coders coding the input data at different coding rates.

27. (original) The transmitter of claim 16 further comprising an inner coder that inner codes the second robust VSB data.

28. (original) A system comprising:

a receiver that receives data, wherein the received data comprises normally ordered first data and reordered second data, wherein the normally ordered first data results from inner and outer coding of first input data and two interleaving operations, and wherein the reordered second data results from inner coding of second input data and one interleaving operation;

an inner decoder that inner decodes the received data to recover the normally ordered first data and the reordered second data;

a data discarder downstream of the inner decoder that discards the reordered second data; and,

an outer decoder downstream of the data discarder that outer decodes the normally ordered first data.

29. (original) The system of claim 28 wherein the normally ordered first data comprises normally ordered robust VSB data, wherein the reordered second data comprises reordered ATSC data, and wherein the data discarder discards the reordered ATSC data.

30. (original) The system of claim 29 wherein the data discarder discards the reordered ATSC data based upon a map indicating locations for the normally ordered robust VSB data and reordered ATSC data in a frame.

31. (original) The system of claim 28 wherein the normally ordered first data comprises normally ordered robust VSB data, wherein the reordered second data comprises reordered ATSC data, and wherein the data discarder discards the reordered ATSC data along with transport headers and Reed/Solomon parity data.

32. (original) The system of claim 31 wherein the data discarder discards the reordered ATSC data, transport headers, and Reed/Solomon parity data based upon a location indicating map.

33. (original) A method of processing received data comprising:

receiving data, wherein the received data comprises normally ordered first data and reordered second data, wherein the normally ordered first data results from inner and outer coding of first input data and two interleaving operations, wherein the reordered second data results from inner coding of second input data and one interleaving operation;

inner decoding the received data to recover the normally ordered first data and the reordered second data; and,

discarding the recovered normally ordered first data.

34. (original) The method of claim 33 wherein the normally ordered first data comprises normally ordered robust VSB data, wherein the reordered second data comprises reordered ATSC data, and wherein the discarding of the normally ordered first data comprises discarding the normally ordered robust VSB data.

35. (original) The method of claim 34 wherein the discarding of the normally ordered robust VSB data is based upon PID numbers.

36. (original) The method of claim 33 wherein the inner decoding of the received data includes reordering the recovered normally ordered first data and the reordered second data in accordance with an interleave comprising the inverse of the one interleaving operation.

37. (original) A system comprising:

a receiver that receives data, wherein the received data comprises normally ordered first data and reordered second data, wherein the normally ordered first data results from two interleaving operations, and wherein the reordered second data results from one interleaving operation;

a decoder that decodes the received data to recover the normally ordered first data and the reordered second data; and,

a data discarder downstream of the decoder that discards the recovered reordered second data.

38. (original) The system of claim 37 wherein the normally ordered first data comprises normally ordered VSB data, wherein the reordered second data comprises reordered ATSC data, and wherein the data discarder discards the reordered ATSC data.

39. (original) The system of claim 38 wherein the data discarder discards the reordered ATSC data based upon a map indicating locations for the normally ordered VSB data and reordered ATSC data in a frame.

40. (original) The system of claim 37 wherein the normally ordered first data comprises normally ordered VSB data, wherein the reordered second data comprises reordered ATSC data, and wherein the data discarder discards the reordered ATSC data along with transport headers and Reed/Solomon parity data.

41. (original) The system of claim 40 wherein the data discarder discards the reordered ATSC data, transport headers, and Reed/Solomon parity data based upon a location indicating map.

42. (original) A method of processing received data comprising:

receiving data, wherein the received data comprises normally ordered first data and reordered second data, wherein the normally ordered first data results from inner and outer coding of first input data and two interleaving operations, wherein the reordered second data results from inner coding of second input data and one interleaving operation;

decoding the received data to recover the normally ordered first data and the reordered second data; and,

upon a user selection, either reordering the recovered normally ordered first data and reordered second data and subsequently discarding the reordered normally ordered first data or discarding the recovered reordered second data and subsequently reordering the recovered normally ordered first data.

43. (original) The method of claim 42 wherein the recovered normally ordered first data are discarded based upon PID numbers, and wherein the reordered second data are discarded based upon a map.

44. (original) A receiver supplying method comprising:

supplying first receivers, wherein each of the first receivers processes received robust N level VSB data and discards N level ATSC data; and,

supplying second receivers, wherein each of the second receivers processes received N level ATSC data and discards robust N level VSB data.

45. (original) The receiver supplying method of claim 44 wherein each of the first receivers discards the received N level ATSC data based upon a map, and wherein each of the second receiver discards the received robust N level VSB data based upon PID numbers.

46. (original) The receiver supplying method of claim 44 further comprising supplying third receivers, wherein each of the third receivers selectively processes both the received robust N level VSB data and N level ATSC data and selectively discards the one of the received robust N level VSB data and N level ATSC data not processed.

47. (original) The receiver supplying method of claim 46 wherein each of the first receivers discards the received N level ATSC data based upon a map, wherein each of the second receivers discards the received robust N level VSB data based upon PID numbers, and wherein each of the third receivers discards the received N level ATSC data based upon the map and discards the received robust N level VSB data based upon the PID numbers.

48. (original) The receiver supplying method of claim 47 wherein N = 8.

49-53 (canceled)

54. (previously presented) An apparatus comprising:

a receiver that receives an electrical signal containing first and second 8 VSB data, wherein the first and second 8 VSB data correspond to different numbers of coded bits; and,

a data discarder that discards one of the first and second 8 VSB data.

55. (original) The apparatus of claim 54 wherein the first 8 VSB data comprises robust VSB data, and wherein the second 8 VSB data comprises ATSC data.

56. (previously presented) The apparatus of claim 54 wherein the received electrical signal contains a data frame comprising a plurality of ATSC data segments, wherein the data frame contains the first and second 8 VSB data, wherein the data frame further contains third 8 VSB data, wherein the first, second, and

third 8 VSB data correspond to different numbers of coded bits, wherein one complete Reed/Solomon block of the first 8 VSB data is packed into two complete ATSC data segments, wherein one complete Reed/Solomon block of the second 8 VSB data is packed into four complete ATSC data segments, and wherein three complete Reed/Solomon blocks of the third 8 VSB data are packed into four complete ATSC data segments.

57. (original) The apparatus of claim 56 wherein the first 8 VSB data result from 1/2 rate encoding, wherein the second 8 VSB data result from 1/4 rate encoding, and wherein the third 8 VSB data result from 3/4 rate encoding.

58. (previously presented) Apparatus comprising:

an input arranged to provide an ATSC frame containing a plurality of ATSC segments, wherein at least some of the ATSC segments comprise outer coded data packed into Reed/Solomon blocks each containing robust VSB data and robust Reed/Solomon parity data between a non-outer coded ATSC transport header and non-outer coded ATSC Reed/Solomon parity data;

a decoder arrangement arranged to decode the outer coded data without regard to the ATSC Reed/Solomon parity data to produce first decoded data including the robust Reed/Solomon parity data; and,

a Reed/Solomon decoder arranged to decode the first decoded data in order to recover decoded robust VSB data.

59. (previously presented) The apparatus of claim 58 including a deinterleaver arranged to deinterleave the first decoded data and to provide the deinterleaved first decoded data to the Reed/Solomon decoder.

60. (previously presented) The apparatus of claim 59 wherein the deinterleaver ~~that~~ provides the deinterleaved first decoded data in a form such that one complete Reed/Solomon block is packed into M complete ATSC segments, and wherein M is an integer equal to 2 or 4.

61. (previously presented) The apparatus of claim 59 wherein the deinterleaver provides the deinterleaved first decoded data in a form such that the

ATSC frame contains an integral number of the Reed/Solomon blocks.

62. (currently amended) Apparatus comprising:

an input to provide a received signal containing at least first~~,~~ and second~~, and third~~ data symbols having the same constellation, wherein the first~~,~~ and second~~, and third~~ data symbols correspond to different numbers of coded bits, wherein the first~~,~~ and second~~, and third~~ data symbols are intermixed in a data frame, wherein the data frame comprises a plurality of ATSC data segments, wherein one complete Reed/Solomon block of the first data symbols is packed into one complete ATSC data segment, and wherein one complete Reed/Solomon block of the second data symbols is packed into two complete ATSC data segments~~, and wherein one complete Reed/Solomon block of the third data symbols is packed into four complete ATSC data segments~~; and,

a decoder arranged to decode at least the second ~~and third~~ data symbols, wherein the decoder includes a first convolutional deinterleaver arranged to deinterleave the first~~,~~ and second~~, and third~~ data symbols, and wherein the decoder includes a second convolutional deinterleaver arranged to deinterleave ~~only~~

the second ~~and third~~ data symbols <u>but not the first data symbols</u>.

63. (previously presented) The apparatus of claim 62 wherein the constellation is an 8 VSB constellation.

64. (currently amended) The apparatus of claim 62 wherein the first data symbols comprise ATSC data symbols, <u>and</u> wherein the second data symbols comprise ~~first~~ robust VSB data symbols~~, and wherein the third data symbols comprises second robust VSB data~~.

65. (currently amended) The apparatus of claim 62 wherein the decoder is arranged to effectively perform decoding at <u>a</u> decoding <u>rate</u> ~~rates~~ of 2/3 times K/L ~~and of 2/3 times P/Q~~, ~~wherein K/L ≠ P/Q,~~ <u>and</u> wherein K/L < 1~~, and wherein P/Q < 1~~.

66. (currently amended) The apparatus of claim 65 wherein K/L = 1/2~~, and wherein P/Q = 1/4~~.

67. (previously presented) The apparatus of claim 62 wherein the first convolutional deinterleaver is characterized by deinterleave parameters B(1), M(1), and N(1), wherein the first convolutional deinterleaver comprises B(1) paths, wherein M(1) is a unit delay through a path of the first convolutional deinterleaver, wherein N(1) = M(1)B(1), wherein B(1) = 52, wherein M(1) = 4, wherein N(1) = 208, wherein the second convolutional deinterleaver is characterized by deinterleave parameters B(2), M(2), and N(2), wherein the second convolutional deinterleaver comprises B(2) paths, wherein M(2) is a unit delay through a path of the second convolutional deinterleaver, wherein N(2) = M(2)B(2), wherein B(2) = 46, wherein M(2) = 4, and wherein N(2) = 184.

68. (previously presented) The apparatus of claim 62 wherein the data frame includes a frame synch segment, and wherein the first and second convolutional deinterleavers are synchronized to the frame synch segment.

69. (currently amended) Apparatus comprising:

a first encoder arranged to encode first ~~and second~~ data symbols; and,

a transmitter that includes a second encoder arranged to encode ~~third~~ second data symbols and the encoded first ~~and second~~ data symbols and that transmits a signal containing the encoded first~~,~~ and second~~, and third~~ data symbols intermixed in a data frame having a plurality of ATSC data segments such that one complete Reed/Solomon block of the first data symbols is packed into ~~one~~ two complete ATSC data segments ~~segment,~~ and such that one complete Reed/Solomon block of the second data symbols is packed into ~~two~~ one complete ATSC data segment ~~segments, and such that one complete Reed/Solomon block of the third data symbols is packed into four complete ATSC data segments~~, wherein the first~~,~~ and second~~, and third~~ data symbols have the same constellation and correspond to different numbers of coded bits.

70. (previously presented) The apparatus of claim 69 wherein the constellation is an 8 VSB constellation.

71. (currently amended) The apparatus of claim 69 wherein the first data symbols comprise first robust VSB data symbols, wherein the second data symbols comprise ~~second robust VSB data, and wherein the third data symbols comprise~~ ATSC data symbols.

72. (currently amended) The apparatus of claim 69 wherein the second encoder is arranged to effectively perform encoding at an encoding rate ~~rates~~ of 2/3 times K/L ~~and of 2/3 times P/Q, wherein K/L ≠ P/Q~~, and wherein K/L < 1~~, and wherein P/Q < 1~~.

73. (currently amended) The apparatus of claim 72 wherein K/L = 1/2~~, and wherein P/Q = 1/4~~.

74. (previously presented) The apparatus of claim 69 wherein the first encoder includes a first convolutional interleaver characterized by interleave parameters B(1), M(1), and N(1), wherein the first wherein the first convolutional interleaver comprises B(1) paths, wherein M(1) is a unit delay through a path of the first convolutional interleaver, wherein N(1) = M(1)B(1), wherein B(1) = 46, wherein M(1) = 4, wherein N(1) = 184, wherein the transmitter includes a second

convolutional interleaver characterized by interleave parameters B(2), M(2), and N(2), wherein the second convolutional interleaver comprises B(2) paths, wherein M(2) is a unit delay through a path of the second convolutional interleaver, wherein N(2) = M(2)B(2), wherein B(2) = 52, wherein M(2) = 4, wherein N(2) = 208.

75. (previously presented) The apparatus of claim 69 wherein the data frame includes a frame synch segment, and wherein the first and second convolutional interleavers are synchronized to the frame synch segment.

76. (previously presented) The apparatus of claim 59 wherein the deinterleaver is characterized by deinterleave parameters B, M and N, wherein the deinterleaver comprises B paths, wherein M is a unit delay through a path, wherein N = MB, wherein M = 4, B = 46, and N = 184.

77. (previously presented) The apparatus of claim 58 wherein the decoder arrangement is arranged to effectively perform decoding at a decoding rate of 2/3 times K/L, and wherein K/L < 1.

78. (previously presented) The apparatus of claim 77 wherein $K/L = 1/2$.

79. (previously presented) The apparatus of claim 77 wherein $K/L = 1/4$.

80. (previously presented) The apparatus of claim 58 wherein the decoder arrangement is arranged to effectively perform decoding at decoding rates of 2/3 times K/L and of 2/3 times P/Q, wherein $K/L \neq P/Q$, wherein $K/L < 1$, and wherein $P/Q < 1$.

81. (previously presented) The apparatus of claim 80 wherein $K/L = 1/2$, and wherein $P/Q = 1/4$.

82. (previously presented) Apparatus comprising:

a Reed/Solomon encoder arranged to encode robust VSB data as robust Reed/Solomon blocks each containing the robust VSB data and robust Reed/Solomon parity data; and,

a transmitter arranged to transmit an ATSC frame containing a plurality of ATSC segments such that at least some of the ATSC segments comprise the robust

Reed/Solomon blocks and such that each of the robust Reed/Solomon blocks is between an ATSC transport header and ATSC Reed/Solomon parity data.

83. (previously presented) The apparatus of claim 82 wherein the transmitter includes a convolutional interleaver arranged to convolutionally interleave an output of the Reed/Solomon encoder.

84. (previously presented) The apparatus of claim 83 wherein the transmitter includes an encoder arrangement that is arranged to effectively perform encoding at encoding rates of 2/3 times K/L and of 2/3 times P/Q, wherein $K/L \neq P/Q$, wherein $K/L < 1$, and wherein $P/Q < 1$.

85. (previously presented) The apparatus of claim 84 wherein $K/L = 1/2$, and wherein $P/Q = 1/4$.

86. (previously presented) The apparatus of claim 84 wherein the encoder arrangement is arranged to provide robust Reed/Solomon blocks in a form such that one complete robust Reed/Solomon block is packed into M

complete ATSC segments, and wherein M is an integer equal to 2 or 4.

87. (previously presented) The apparatus of claim 84 wherein the convolutional interleaver is arranged to provide interleaved robust Reed/Solomon blocks in a form such that the ATSC frame contains an integral number of the Reed/Solomon blocks.

88. (previously presented) The apparatus of claim 83 wherein the convolutional interleaver is characterized by interleave parameters B, M and N, wherein the convolutional interleaver comprises B paths, wherein M is a unit delay through a path, wherein $N = MB$, wherein $M = 4$, $B = 46$, and $N = 184$.

89. (previously presented) The apparatus of claim 82 wherein the transmitter includes an encoder arrangement that is arranged to effectively perform encoding at an encoding rate of 2/3 times K/L, and wherein $K/L < 1$.

90. (previously presented) The apparatus of claim 89 wherein $K/L = 1/2$.

91. (previously presented) The apparatus of claim 89 wherein K/L = 1/4.

92. (new) The apparatus of claim 62 wherein the received signal further contains third data symbols having the same constellation as the first and second data symbols, wherein the third data symbols correspond to a number of coded bits different than the numbers of coded bits corresponding to the first and second data symbols, wherein the third data symbols are intermixed with the first and second data symbols in the data frame, wherein one complete Reed/Solomon block of the third data symbols is packed into four complete ATSC data segments, wherein the decoder is arranged to also decode the third data symbols, wherein the first convolutional deinterleaver is arranged to also deinterleave the third data symbols, and wherein the second convolutional deinterleaver is arranged to also deinterleave the third data symbols.

93. (new) The apparatus of claim 92 wherein the first data symbols comprise ATSC data symbols, wherein the second data symbols comprise first robust VSB data symbols, and wherein the third data symbols comprises second robust VSB data.

94. (new) The apparatus of claim 92 wherein the decoder is arranged to effectively perform decoding at decoding rates of 2/3 times K/L and of 2/3 times P/Q, wherein $K/L \neq P/Q$, wherein $K/L < 1$, and wherein $P/Q < 1$.

95. (new) The apparatus of claim 94 wherein $K/L = 1/2$, and wherein $P/Q = 1/4$.

96. (new) The apparatus of claim 69 wherein the first encoder is arranged to also encode third data symbols, wherein the second encoder is arranged to also encode the third data symbols, wherein the transmitted signal also contains the encoded third data symbols such that one complete Reed/Solomon block of the third data symbols is packed into four complete ATSC data segments, and wherein the third data symbols have the same constellation as the first and second data symbols and correspond to a number of coded bits different than the

numbers of coded bits corresponding to the first and second data symbols.

97. (new) The apparatus of claim 96 wherein the first data symbols comprise first robust VSB data symbols, wherein the third data symbols comprise second robust VSB data, and wherein the second data symbols comprise ATSC data symbols.

98. (new) The apparatus of claim 96 wherein the second encoder is arranged to effectively perform encoding at encoding rates of 2/3 times K/L and of 2/3 times P/Q, wherein $K/L \neq P/Q$, wherein $K/L < 1$, and wherein $P/Q < 1$.

99. (new) The apparatus of claim 98 wherein $K/L = 1/2$, and wherein $P/Q = 1/4$.